

Heritage Resources 9

Affected Environment

Heritage resources are generally regarded as resources associated with human use of an area. They can include archaeological sites or ethnographic locations associated with past and present use of an area by a community. Archeological sites are a type of heritage resource. They are defined as the tangible remains of past human activity. Archeological sites are distinct geographic units that can include architecture, isolated features such as agricultural terraces or historic road corridors, and artifact scatters. The Carson National Forest defines archeological sites as loci of purposeful human activity which has resulted in a deposit of cultural material beyond the level of one or a few accidentally lost artifacts. Manifestations that do not meet this site definition as described in Forest Service Handbook 2309.24 are considered isolated occurrences.

When these physical manifestations are associated with living peoples they may be considered ethnographic resources. Most often ethnographic resources are associated with “traditional cultural properties” (TCPs), which have “traditional cultural significance” (National Register Bulletin 38). Traditional cultural properties can range from a traditional plant gathering area to a set of historic structures to an entire landscape that is considered sacred by a particular culture. Traditional cultural properties can be considered eligible for inclusion in the National Register of Historic Places because of their association with cultural practices or beliefs of a living community.

The USDA Forest Service and Bureau of Land Management are required to comply with the implementing regulations (36 CFR Part 800) of the National Historic Preservation Act (NHPA) of 1966 (P.L. 89-665) as amended. Heritage resource inventories and evaluations are required prior to any ground disturbing activities in an effort to locate and identify heritage resource sites. These requirements are carried forward in the forest plan standards (USDA 1987) as follows:

Section 106 of the NHPA requires a Federal agency head with jurisdiction over a Federal, Federally assisted, or Federally licensed undertaking to take into account the effects of the agency's undertaking on properties included in or eligible for the National Register of Historic Places (NRHP)...(36 Code of Federal Regulations 800.1)

In addition to identifying and determining whether archeological sites located within the boundaries of an undertaking are eligible to the National Register, the Government also has obligations under the NHPA of 1966 as amended, National Environmental Policy Act, the American Indian Religious Freedom Act, and Executive Order 13007 to consult with tribal entities regarding potential impacts of projects on areas of tribal concern. Consultation deals with concerns about Federal actions with the potential to affect locations of traditional concern, religious practices and other traditional cultural uses, as well as archaeological sites and other modern and/or ancestral tribal remains.

The BLM portion of the analysis area is within an area designated in the Resource Management Plan, 1988, as an Area of Critical Environmental Concern (ACEC). This designation is to serve as a red flag for any type of proposals that could affect pueblo remains of the cultures that could

have used the valley as early as 9500 BC. In this case, the preliminary proposal was modified by KCEC with BLM input, to the current proposed action in order to avoid pueblo sites. This also avoids significant issues due to potential disturbance of archeological resources.

Cultural History

The proposed project area is located on the Tres Piedras Ranger District of the Carson National Forest and the Taos Field Office of the Bureau of Land Management. Not all of the alternative routes have been surveyed for heritage resources at this time, but will be completed soon. Archaeological remains in the vicinity of Carson to Ojo Caliente indicate that this area was first occupied several thousand years ago. A more detailed discussion of the cultural history can be found in Young and Lawrence 1988, Irwin-Williams 1973, Cordell 1979, Stewart and Gauthier 1980, and Chambers Group 1991. A discussion of the time periods represented on this portion of the forest is available in the heritage resources report. [266]

Tribal Consultation

Traditional cultural properties (TCPs) are often difficult to identify during standard heritage resource surveys, and none have been identified in the project's area of potential effect. Traditional cultural properties are most often identified through tribal consultation. The analysis team initiated ongoing consultation for the Carson to Ojo Caliente proposed 115 kV transmission line in October 1999. [25-30, 35]

Initially, the six closest tribes to the project area were contacted and invited to participate in the consultation process. In October 1999, they were sent a letter, information about the project, and a map showing the project location. [25-30, 35] Followup phone calls were also made, and in some cases several calls were placed to verify that the package had been received. [34, 38, 42, 43, 46, 47, 48] These tribes were the Tewa pueblos of San Juan, Santa Clara, San Ildefonso, Pojoaque, Tesuque, and Nambe. In April 2000, these and 10 other tribes (Taos, Picuris, Jemez Pueblo, Jicarilla Apache, Ute, Ute Mountain Ute, Comanche, Navajo, Hopi and Zuni) were sent information about the project and asked if they had any concerns about TCPs, shrines, religious sites, resource gathering areas, or any other issues important to the tribe. [68-84] All of these tribes either have ancestral ties to the area or have expressed an interest in projects on the Carson National Forest. In addition, this project was included in a project list with location maps of Carson National Forest undertakings that was sent to these 16 tribes on May 17, 2002 as part of the initial annual tribal consultation for the Carson National Forest. [247.2] This project is also identified on the Carson National Forest NEPA quarterly report sent four times a year to these same tribes. [67, 146, 177, 196, 207, 222, 236, 244, 246, 248-250, 253, 259]

To date, five tribes (Ute Mountain Ute, Jicarilla Apache, San Ildefonso, San Juan, and Santa Clara) requested a field trip, and three have visited the project area. [53, 55, 56, 57] Meetings were also held at the request of four tribes (Taos, Picuris, Hopi, and Jicarilla Apache). [74, 202, 164, 168] Five tribes have requested copies of the archaeological clearance reports and will provide comments after they review the reports (Santa Clara, San Juan, Nambe, San Ildefonso, and Pojoaque). Five tribes have expressed that they have no concern or deferred to other tribes that are involved in the consultation process (Hopi, Taos, Comanche, San Ildefonso and Navajo).

None of the tribes involved in the consultation process have identified any shrines, TCPs or other locations within the proposed project area that have been or are currently being used for resource gathering or other types of traditional or religious use. The Hopi Tribe submitted a list of general

concerns about burials, site avoidance, eagles, and certain plants that may be in the area, and asked that they be considered in project planning. One common theme was raised by several of the tribes. There was a concern about archaeological sites, and they wanted to be sure that the undertaking did not disturb the sites. Some requested monitoring to ensure site avoidance. Several tribes voiced concerns about burials and wanted to be contacted if any human remains were found. No other tribal issues have been raised.

To date, there are no known TCPs, shrines, religious sites, or resource gathering sites in the proposed undertaking's area of potential effect. Because the project can be designed to avoid direct impacts to archaeological sites, it is anticipated that all sites will be avoided (MM HR 1-6). If sites cannot be avoided, or if human remains are found during project implementation, the tribes, State Historic Preservation Office and Advisory Council will be contacted and mitigation measures will be developed (MM 7). No other tribal issues have been identified.

Environmental Consequences

Heritage resources are nonrenewable resources that are easily damaged by ground-disturbing activities. Although some artifacts are susceptible to damage from heavy equipment use, ground disturbance, or burning, it is the provenience of the artifacts, or their horizontal and vertical location in relation to each other and to the soil deposits, that is most important.

Impacts to heritage resources could result from direct or indirect project effects. Direct effects are caused by physical destruction resulting from project intrusion, construction activities, or post-construction operation and maintenance procedures. Potential direct effects may take one or more of the following forms:

- Ground disturbance associated with transmission line construction such as: boring of holes with an auger for pole placement; trenching if the line is to be buried; cutting and removal of trees in the immediate vicinity of poles; cutting and removal of trees in the transmission line corridor; removal of distribution line poles; staging areas; and equipment and construction employee parking.
- Access road improvements and construction such as grubbing and clearing of trees with a dozer, blading and heavy maintenance with a dozer, opening previously closed roads with a dozer, and construction of new access roads.
- Heavy equipment/vehicle movement across archeological site areas during construction and maintenance of the line.
- Exposure of previously unidentified sites during construction.

Indirect effects can result from such things as providing access to previously inaccessible areas, illegal artifact collecting, or increased erosion due to newly constructed roads or tree cutting. Indirect effects of a power line could also include changing settlement patterns and/or land development as a result of the availability of electricity in areas that previously had no electrical service.

These direct and indirect impacts could lessen the value of heritage resources by destroying important scientific data and diminishing the physical setting of sites. Heritage resources can be diminished by any change in their historical, architectural, archaeological, cultural character or ecological setting. Adverse impacts to heritage resource sites can result in their damage or com-

plete destruction, the effects of which are irreversible. In cases of partial damage, the undisturbed portion of the site may still provide valuable information.

Under the National Historic Preservation Act, an impact is considered significant if it would result in an adverse effect to a heritage resource that is on or eligible for the National Register of Historic Places. An adverse effect is found when an undertaking may alter, directly or indirectly, the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places. Examples of adverse effects can include:

- physical damage;
- disruption of the setting of the resource when that setting contributes to the resource's significance;
- introduction of visual or audible elements that are out of character;
- neglect or abandonment; and/or
- transfer, sale or lease.

If it is found that a project will have an adverse effect on heritage resources, the forest will consult with the State Historic Preservation Office, the Advisory Council, and any interested parties including tribes to develop a memorandum of agreement concerning the steps to be taken to lessen or mitigate adverse effects.

As a result of the heritage resource investigations, scoping and consultation with tribes and the State Historic Preservation Office, several mitigation measures to avoid or minimize potential effects to heritage resources would be applied under any of the alternatives and the option. The application of these mitigation measures is assumed in the analysis of effects on heritage resources:

- Use selective pole placement to avoid direct impacts to heritage resource sites.
- Do not designate or construct access routes through heritage resource sites.
- In the vicinity of historic structures, use single wooden poles, nonglare wire, and selective pole placement to minimize impacts to the structures' surroundings.
- Monitor construction activities in the vicinity of archaeological sites.

Alternative A - No Action

Under the No Action Alternative, the power line would remain as is in its current location with no upgrade. There would be no undertaking. Because there would be no changes in the status quo, this alternative would have no potential to impact heritage resources.

Alternative B - Black Mesa-Cerro Azul Tap

The removal of poles and the boring of holes for poles could damage or destroy subsurface artifacts, features or human remains if they occur within heritage resource site boundaries. The cutting of trees within the corridor through the piñon-juniper woodland along the proposed right-of-way could damage or destroy surface artifacts or features by use of mechanical equipment or felling of trees within site boundaries. Access road improvements, two-track development and site preparations such as grubbing could damage or destroy archeological sites, surface features and artifacts. Driving large, heavy vehicles across sites could also damage and destroy heritage resources.

Under this alternative, all of the proposed route including the new construction from Black Mesa north to the existing corridor and the existing corridor from there to Ojo Caliente has been surveyed. Three sites consisting of small historic trash scatters are within the proposed location of Alternative B. These sites have been determined to be not eligible for the National Register of Historic Places. As such, the alternative would have no direct effects to heritage resources.

Creating more access to the area could attract more vehicular traffic with direct impacts to the road and increased erosion. It could also lead to an increase in illegal artifact collecting of nearby sites. Overall the increased access would be minimal, as there are already roads in the vicinity. There would be minimal indirect effect to heritage resources.

Alternative B was developed in conjunction with BLM and KCEC in order to avoid pueblo sites that occur within the BLM ACEC. The preliminary proposal was a straight line from the proposed tap to the substation, which would have crossed over a pueblo site. A modification was developed as the proposed action that follows the existing route and avoids cultural resources.

Alternative C - Existing Corridor

The removal of poles and the boring of holes for poles could damage or destroy subsurface artifacts, features or human remains if they occur within heritage resource site boundaries. Access road improvements, two-track development and site preparations such as grubbing could damage or destroy archeological sites, surface features and artifacts. Driving large, heavy vehicles across sites could also damage and destroy heritage resources.

Under this alternative, the existing corridor has been surveyed. Six sites are in the existing right-of-way, consisting of three historic trash scatters and a small disturbed lithic scatter that have been determined to not be eligible for the national register, one lithic scatter that is eligible for the register, and the Carson School House, a property that is listed on the National Register of Historic Places. The project can be designed to avoid direct impacts to these sites. As such, the alternative would have no direct effects to heritage resources.

There would be no increase in access to the area as this alternative follows an existing right-of-way. The area around Carson has several historic properties adjacent to the power line. Upgrading the line could make the power line more visible and could detract from the properties' settings. The use of single wooden poles and nonglare wire would help to minimize the impact (MM VQ1). Alternative C combined with the existing impacts of the current power line would not be adverse.

Alternative C would follow the same route as Alternative B through the BLM ACEC and would not result in any effects to cultural resources.

Alternative D - 285 P

The removal of poles and the boring of holes for poles could damage or destroy subsurface artifacts, features or human remains if they occur within heritage resource site boundaries. The cutting of trees within the corridor through the piñon-juniper woodland along the proposed right-of-way could damage or destroy surface artifacts or features by the use of mechanical equipment or the falling of trees within site boundaries. Access road improvements, two-track development and site preparations such as grubbing could damage or destroy archeological sites, surface features

and artifacts. Driving large, heavy vehicles across sites could also damage and destroy heritage resources.

Surveys for the new construction portion of this alternative have not yet been completed for heritage resources. Nearby surveys indicate that the site density would be similar to Alternatives B and C. There are three sites along the existing portion of the right-of-way that would be used. These three historic trash scatters have been determined to not be eligible for the register. The majority of Alternative D would follow the same route as Alternatives B and C through BLM lands with a slight variation along the west edge of those lands. The project can be designed to avoid direct impacts to sites in the unsurveyed areas. As such, the alternative would have no direct effects to heritage resources as long as the sites are avoided.

Creating more access to the area could attract more vehicular traffic with direct impacts to the road and increased erosion. It could also lead to an increase in illegal artifact collecting. Overall, the increased access would be minimal, however, as there are already roads in the vicinity. If there are any historic structures along the right-of-way, upgrading the line could make the power line more visible, and could detract from the visual setting. The use of single wooden poles and nonglare wire would help to minimize the impact (MM VQ1). The indirect effects are not considered to be adverse.

There would also be approximately 6 miles of the existing 25 kV line removed under this alternative. There are no poles in any sites that would result in disturbance along this section of line.

Option - Tres Piedras Connection

The boring of holes for poles along the edge of the piñon-juniper type could damage or destroy both surface and subsurface artifacts, features or human remains. Access road improvements and site preparations such as grubbing could damage or destroy archeological sites, surface features and artifacts. Driving large, heavy vehicles across sites could also damage and destroy heritage resources.

Heritage resources surveys have not yet been completed for this option. Nearby surveys indicate that the site density would be similar to Alternatives B and C. The project can be designed to avoid direct impacts to sites, particularly if the power line stays in the U.S. 285 right-of-way. As such, the option would have no direct effects to heritage resources as long as the sites are avoided.

Because this option follows the existing highway, it would not result in any new clearing, and would not increase access to the area. If there are any historic structures along the right-of-way, the presence of a new power line would be visible and could detract from the visual setting. The use of single wooden poles and nonglare wire would help to minimize the impact (MM VQ!). The indirect impacts would not be adverse.

Cumulative Effects

Cumulative effects to heritage resources can be difficult to assess. One of the major reasons for this is that in order to assess the cumulative effects, we must consider past, present and reasonably foreseeable future activities and the impacts that all these actions have had and will have on the resources. Unlike other forest resources, when we consider past activities on the Carson National Forest and the impacts they have had on heritage resources, we are not looking at a 100- to

200-year period. In the case of the Tres Piedras Ranger District, we are looking at 8,000 years of past activity. Through this long span of time, archeological sites might endure such natural events as fire and floods. They might also exist through such prehistoric land use activities as firewood harvests, plant gathering, adobe soil collection, and clay gathering. The effects of these past activities on the resource are difficult to determine. Attention must focus on the contemporary activities that have taken place in the recent past or near future that may impact a heritage resource and the cumulative impacts of these actions over time.

One approach to determine cumulative effects would be to consider the effects of the proposed action as well as past and future undertakings on heritage resources. Federal undertakings must take the effect to heritage resources under account during the planning process. As a result, most projects are designed to avoid heritage resources. This part of the Carson National Forest is not heavily developed, there have been few undertakings, and future projects in the area would likely be limited to scattered firewood sales and range projects. Impacts from these types of undertakings could be minimized by site avoidance. Since site avoidance generally results in no direct impacts to heritage resources, the cumulative effects that the proposed project or future projects might have is minimal.

Another approach would be to evaluate cumulative effects based on the language used in the National Historic Preservation Act and National Register Bulletin 15. As discussed earlier, a significant impact to heritage resources that are eligible to the National Register of Historic Places is called an adverse effect. An adverse effect is found when an undertaking may alter, directly or indirectly, the characteristics of a historic property that qualify the property for inclusion in the national register. Adverse effects can include: physical damage, disruption of the setting of the resource when that setting contributes to the resource's significance, and the introduction of visual or audible elements that are out of character. These effects could result in an undesirable cumulative impact to heritage resources by either destroying the resource or altering the characteristics of the property.

According to National Register Bulletin 15, an historic property must exhibit both of the following to be eligible to the NRHP: (1) It must be shown to be significant under the national register criteria; and (2) It must have site integrity. Site integrity is "the ability of the site to convey its significance." The seven aspects of integrity include: location, design, setting, materials, workmanship, feeling and association. When site integrity is compromised through actions that destroy or damage any of the seven aspects, the significance of the site can be diminished.

As noted earlier, through site avoidance, physical damage to sites is unlikely. Disruption of the setting and/or the introduction of the visual elements that are out of character would be the most probable impacts of a 115 kV transmission line through any of the alternatives. These impacts could result in some degradation of site integrity and result in undesirable cumulative effects to the heritage resources within the proposed project area, if these effects cannot be mitigated. While disruption of a setting would likely impact any heritage resource site, it seems the effects of introducing elements out of character with a site's surroundings would be more significant for standing historic structures. Under any of the alternatives, cumulative effects are considered to be minimal.

Alternative Comparison

Under the No Action Alternative, there is no undertaking. Cumulative effects from impacts to the sites and their surroundings from future firewood sales or other forest management activities in the area would not affect the qualities of the sites that may make them eligible for the national register as long as the sites are avoided.

Under Alternatives B, C, D and the Option, cumulative effects from increased access to the area, erosion or future development would be minimal. Impacts to the sites and their surroundings from future firewood sales or other forest management activities in the area would not affect the qualities of the sites that may make them eligible for the national register as long as the sites are avoided. Long-term access to BLM lands would remain limited to existing roads and trails so no additional cumulative effects are anticipated within the Ojo Caliente ACEC.